

Lake Hall Lake Vegetation Index Results (7-20-2017)

The Lake Vegetation Index (LVI) is a multi-metric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations,

and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units (Figure 1). Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

Aquatic life use category	LVI Range	Description
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less than 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake Hall was 66, placing the lake's vegetative community in the healthy category.

Sixty five species were found during the survey. The native species, watershield (*Brasenia schreberi*), fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*) and fragrant waterlily (*Nymphaea odorata*) were the most dominant species in the lake. Other native shoreline vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and swamp tupelo (*Nyssa sylvatica* var. *biflora*).

Unfortunately, Chinese tallow tree (*Sapium sebiferum*), torpedo grass (*Panicum repens*) and camphor tree (*Cinnamomum camphora*), are Category I Invasive Exotics (Florida Exotic Pest Control Council <http://www.fleppc.org/>) and were found in Lake Hall. Alligator weed (*Alternanthera philoxeroides*) is a Category II Invasive Exotic found in the lake. Single grass (*Urochloa* sp.) was another exotic found in Lake Hall.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Hall LVI survey (7-20-17).

Scientific Name	Common Name
<i>Acer rubrum</i>	red maple
<i>Alternanthera philoxeroides(II)</i>	alligator weed
<i>Ampelopsis arborea</i>	peppervine
<i>Andropogon virginicus</i>	broomsedge bluestem
<i>Bacopa caroliniana</i>	lemon bacopa
<i>Betula nigrans</i>	river birch
<i>Bidens laevis</i>	smooth beggartick
<i>Bidens mitis</i>	smallfruit beggartick
<i>Boehmeria cylindrica</i>	false nettle
<i>Brasenia schreberi</i>	watershield
<i>Cabomba caroliniana</i>	fanwort
<i>Cephalanthus occidentalis</i>	buttonbush
<i>Ceratophyllum demersum</i>	coontail
<i>Cinnamomum camphora (I)</i>	camphor tree
<i>Decodon verticillatus</i>	swamp loosestrife
<i>Eleocharis baldwinii</i>	road-grass
<i>Eupatorium capillifolium</i>	dogfennel
<i>Fuirena pumila</i>	dwarf umbrella sedge
<i>Habenaria repens</i>	water spider orchid
<i>Hydrocotyle</i> sp.	water pennywort
<i>Hydrolea quadrivalvis</i>	waterpod
<i>Hypericum</i> sp.	St. Johns wort
<i>Ipomoea</i> sp.	morning glories
<i>Juncus effusus</i>	common rush
<i>Juncus marginatus</i>	grassleaf rush
<i>Liquidambar styraciflua</i>	American sweetgum
<i>Ludwigia arcuata</i>	needleleaf ludwigia
<i>Ludwigia leptocarpa</i>	anglestem primrose willow
<i>Ludwigia sphaerocarpa</i>	globe-fruited primrose willow

<i>Ludwigia suffruticosa</i>	shrubby primrose willow
<i>Mikania scandens</i>	climbing hempvine
<i>Myrica cerifera</i>	wax myrtle
<i>Myriophyllum heterophyllum</i>	twoleaf watermilfoil
<i>Myriophyllum pinnatum</i>	cutleaf watermilfoil
<i>Nelumbo lutea</i>	American lotus
<i>Nuphar</i> sp.	spatterdock
<i>Nymphaea odorata</i>	fragrant waterlily
<i>Nymphoides aquatica</i>	banana lilly
<i>Nyssa sylvatica</i> var. <i>biflora</i>	swamp tupelo
<i>Packera glabella</i>	butterweed
<i>Panicum hemitomon</i>	maidencane
<i>Panicum repens(I)</i>	torpedo grass
<i>Pinus taeda</i>	loblolly pine
<i>Polygonum densiflorum (glabrum)</i>	denseflower knotweed
<i>Polygonum hirsutum</i>	hairy smartweed
<i>Polygonum punctatum</i>	dotted smartweed
<i>Pontederia cordata</i>	pickerelweed
<i>Quercus nigra</i>	water oak
<i>Quercus virginiana</i>	southern live oak
<i>Rhexia mariana</i>	maryland meadowbeauty
<i>Rhus copallinum</i>	winged sumac
<i>Sagittaria filiformis</i>	threadleaf arrowhead
<i>Salix carolina</i>	coastal plain willow
<i>Sapium sebiferum (I)</i>	Chinese tallow tree
<i>Scirpus cyperinus</i>	woolgrass
<i>Sphagnum</i> sp.	sphagnum moss
<i>Taxodium ascendens</i>	pond cypress
<i>Toxicodendron radicans</i>	eastern poison ivy
<i>Triadenum virginicum</i>	marsh st. johnswort
<i>Urochloa</i> sp.	single grass
<i>Utricularia floridana</i>	Florida yellow bladderwort

<i>Utricularia foliosa</i>	leafy bladderwort
<i>Vitis rotundifolia</i>	muscadine
<i>Woodwardia virginica</i>	Virginia chain fern
<i>Xyris</i> sp.	yelloweyed grass

Names in bold are exotics.

I - Category I Invasive Exotics

II - Category II Invasive Exotic

For additional information about the LVI please go to the Florida Department of Environmental Protection webpage;

http://www.dep.state.fl.us/water/sas/training/docs/lvi_primer.pdf.

For additional information about exotic Category I invasive exotic plants, please go to the Florida Exotic Pest Plant Council

<http://www.fleppc.org/list/list.htm>.

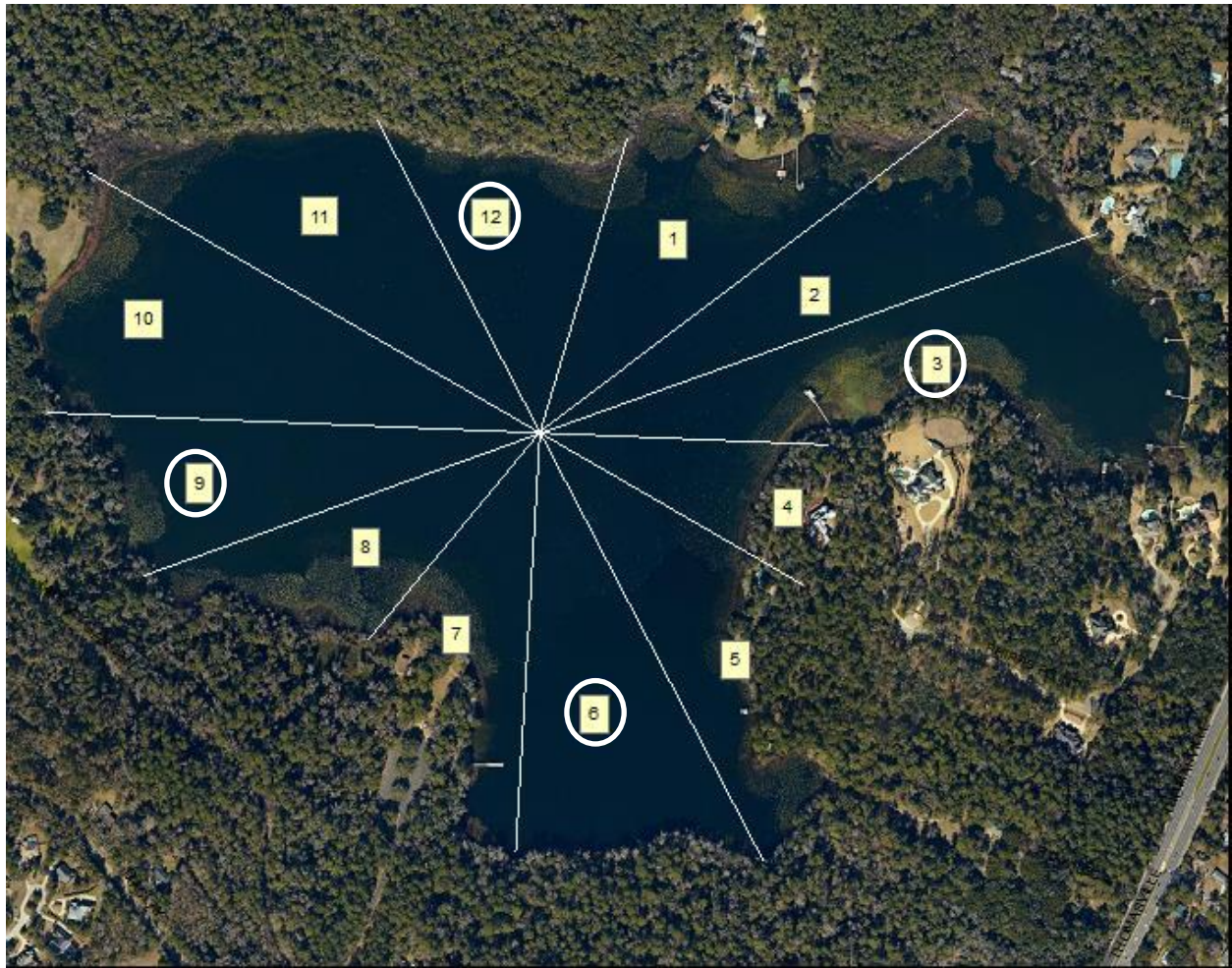


FIGURE 1. Lake Hall showing unit divisions. Circled numbers denote surveyed units.